

10/500,334

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1600TXM

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 JUL 20 Powerful new interactive analysis and visualization software,  
STN AnaVist, now available  
NEWS 4 AUG 11 STN AnaVist workshops to be held in North America  
NEWS 5 AUG 30 CA/CaPlus -Increased access to 19th century research documents  
NEWS 6 AUG 30 CASREACT - Enhanced with displayable reaction conditions  
NEWS 7 SEP 09 ACD predicted properties enhanced in REGISTRY/ZREGISTRY  
NEWS 8 SEP 22 MATHDI to be removed from STN

NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

\*FEDRIP - Federal Research in Progress Database

\* The files listed above are temporarily unavailable.

FILE 'HOME' ENTERED AT 14:31:54 ON 26 SEP 2005

=> file registry

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 14:32:08 ON 26 SEP 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 SEP 2005 HIGHEST RN 863878-84-6  
DICTIONARY FILE UPDATES: 25 SEP 2005 HIGHEST RN 863878-84-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

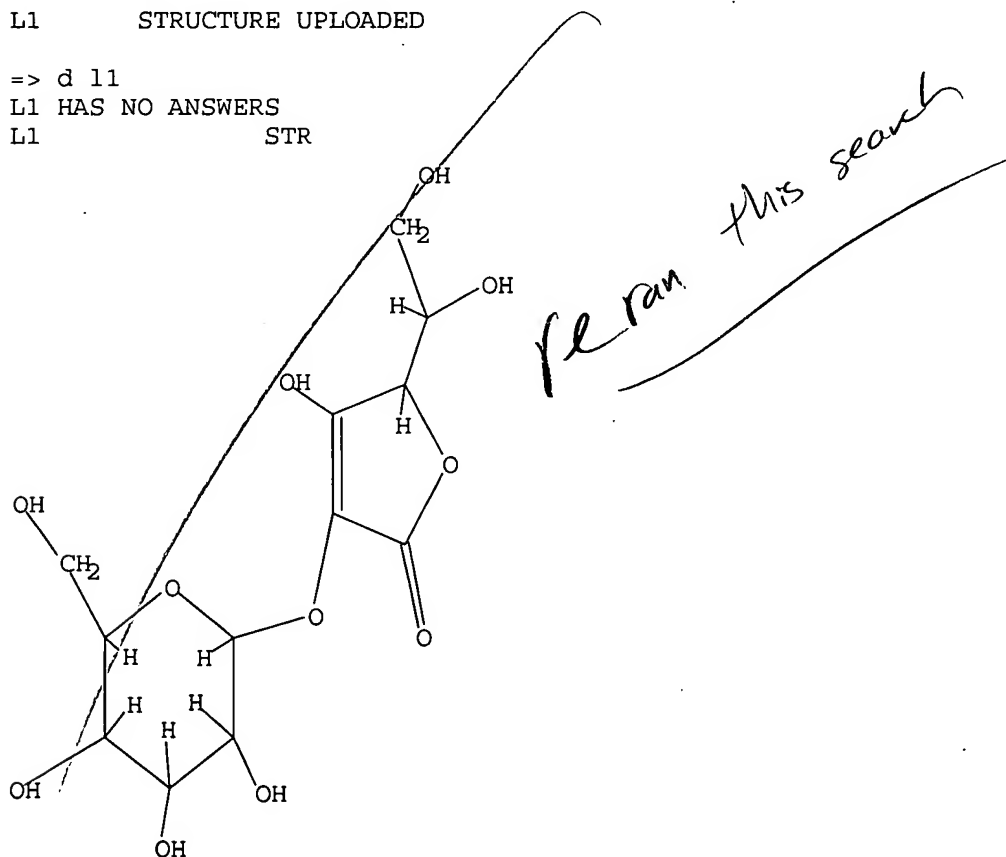
Uploading C:\Program Files\Stnexp\Queries\10500334.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=>

Uploading C:\Program Files\Stnexp\Queries\10500334a.str

L2           STRUCTURE UPLOADED

=> d l2

L2 HAS NO ANSWERS

L2                   STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s l1 exact full

FULL SEARCH INITIATED 14:33:00 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -           40 TO ITERATE

100.0% PROCESSED           40 ITERATIONS

6 ANSWERS

SEARCH TIME: 00.00.01

L3           6 SEA EXA FUL L1

=> s l2 full

FULL SEARCH INITIATED 14:33:15 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -           989 TO ITERATE

100.0% PROCESSED           989 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

L4           1 SEA SSS FUL L2

=> s l1 full

FULL SEARCH INITIATED 14:33:22 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -           2567 TO ITERATE

100.0% PROCESSED           2567 ITERATIONS

37 ANSWERS

SEARCH TIME: 00.00.01

L5           37 SEA SSS FUL L1

=> d scan l4

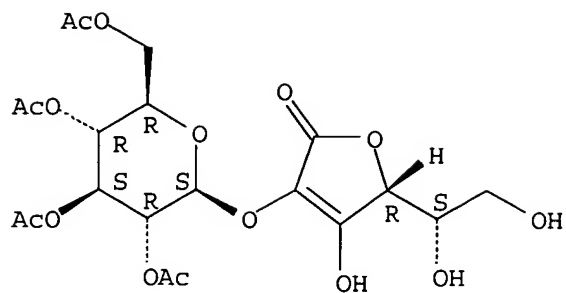
L4   1 ANSWERS   REGISTRY   COPYRIGHT 2005 ACS on STN

IN   L-Ascorbic acid, 2-O-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl) -  
     (9CI)

MF   C20 H26 O15

Absolute stereochemistry.

*Claim P cpl*



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

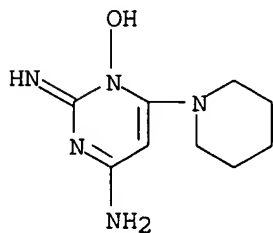
ALL ANSWERS HAVE BEEN SCANNED

=> d scan 1-5 15

'1-5' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

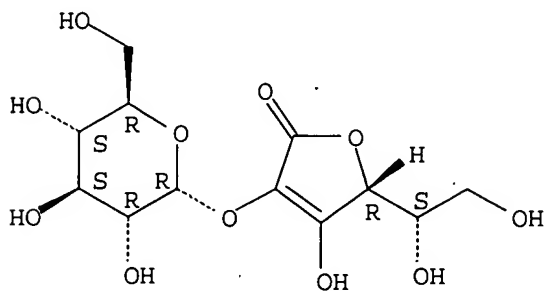
L5 37 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
 IN L-Ascorbic acid, 2-O- $\alpha$ -D-glucopyranosyl-, mixt. with  
 1,2-dihydro-1-hydroxy-2-imino-6-(1-piperidinyl)-4-pyrimidinamine (9CI)  
 MF C12 H18 O11 . C9 H15 N5 O  
 CI MXS

CM 1



CM 2

Absolute stereochemistry.



The following are valid formats:

Substance information can be displayed by requesting individual

fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN  
  
CALC - Table of calculated properties  
EPROP - Table of experimental properties  
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL  
  
IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented  
  
OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels  
  
SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

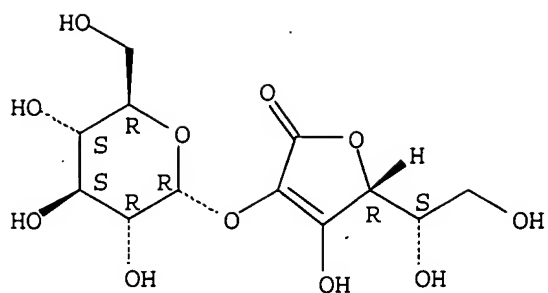
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):4

L5 37 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN L-Ascorbic acid, 2-O- $\alpha$ -D-glucopyranosyl-, potassium salt (9CI)  
MF C12 H18 O11 . x K

Absolute stereochemistry.

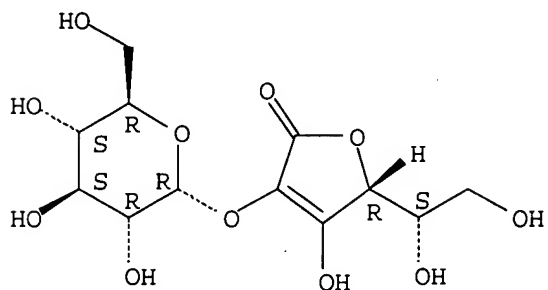


● x K

L5 37 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
 IN L-Ascorbic acid, 2-O-α-D-glucopyranosyl-, compd. with  
 2-(methylamino)ethanesulfonic acid monosodium salt (1:1) (9CI)  
 MF C12 H18 O11 . C3 H9 N O3 S . Na

CM 1

Absolute stereochemistry.



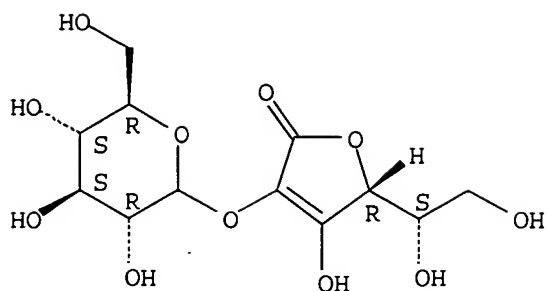
CM 2

MeNH-CH<sub>2</sub>-CH<sub>2</sub>-SO<sub>3</sub>H

● Na

L5 37 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
 IN L-Ascorbic acid, 2-O-D-glucopyranosyl- (9CI)  
 MF C12 H18 O11

Absolute stereochemistry.

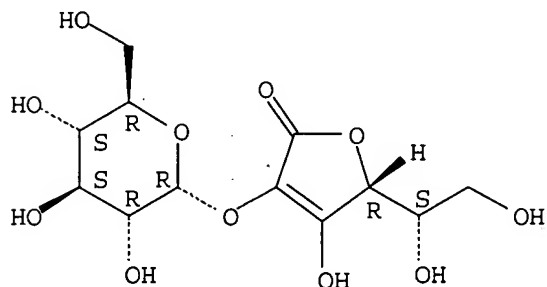


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L5 37 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
 IN L-Ascorbic acid, 2-O-α-D-glucopyranosyl-, mixt. with  
 trans-5-methyl-2-(1-methylethyl)cyclohexanone (9CI)  
 MF C12 H18 O11 . C10 H18 O  
 CI MXS

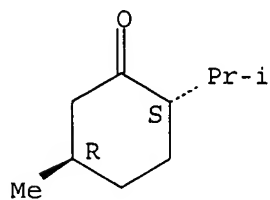
CM 1

Absolute stereochemistry.



CM 2

Relative stereochemistry.



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d his

(FILE 'HOME' ENTERED AT 14:31:54 ON 26 SEP 2005)

FILE 'REGISTRY' ENTERED AT 14:32:08 ON 26 SEP 2005

L1 STRUCTURE UPLOADED  
 L2 STRUCTURE UPLOADED  
 L3 6 S L1 EXACT FULL

L4 1 S L2 FULL  
L5 37 S L1 FULL

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

377.77

377.98

FILE 'CAPLUS' ENTERED AT 14:34:21 ON 26 SEP 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 26 Sep 2005 VOL 143 ISS 14

FILE LAST UPDATED: 25 Sep 2005 (20050925/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 14

L6 3 L4

=> d fbib hitstr abs 1-3 16

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:14228 CAPLUS

DN 142:100007

TI Skin preparations containing ascorbic acid derivative

IN Maeda, Mitsuru; Nakao, Masahiro; Fukami, Harukazu

PA Suntory Limited, Japan

SO PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005000319	A1	20050106	WO 2004-JP9012	20040625
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
			JP 2003-183610	A 20030626



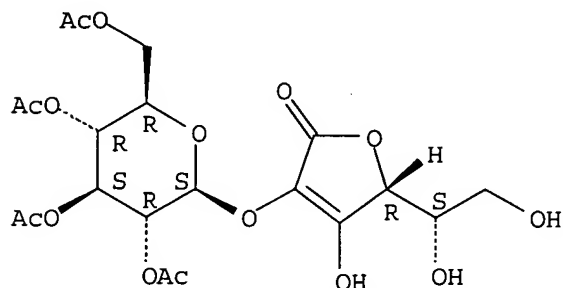
IT 562043-83-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of glucopyranosylascorbate for use in topical compns.)

RN 562043-83-8 CAPLUS

CN L-Ascorbic acid, 2-O-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB It is intended to provide a skin composition for external use that contains an ascorbic acid derivative having a high stability, being continuously usable in vivo, having a strong antioxidant effect and showing little skin irritation and has an excellent skin permeability. A composition for external use is characterized by containing 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid or its salt or ester being safe to the human body together with optionally treated koji mold cells.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:178992 CAPLUS

DN 140:374192

TI 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid, a novel ascorbic acid analogue  
isolated from Lycium fruit

AU Toyoda-Ono, Yoshiko; Maeda, Mitsuru; Nakao, Masahiro; Yoshimura, Makiko;  
Sugiura-Tomimori, Namino; Fukami, Harukazu

CS Health Care Science Laboratory, Institute for Food & Beverage,  
Technological Development Center, Suntory Ltd., Osaka, 618-0001, Japan

SO Journal of Agricultural and Food Chemistry (2004), 52(7), 2092-2096  
CODEN: JAFCAU; ISSN: 0021-8561

PB American Chemical Society

DT Journal

LA English

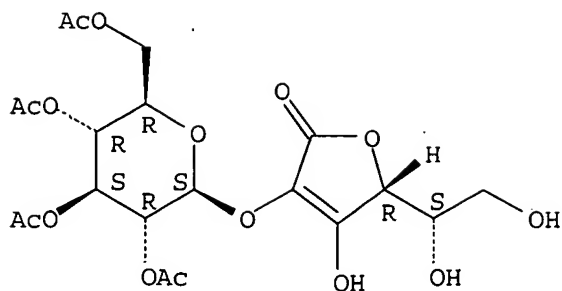
IT 562043-83-8

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(ascorbic acid analog, 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid,  
isolated from Lycium fruit)

RN 562043-83-8 CAPLUS

CN L-Ascorbic acid, 2-O-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB A novel stable precursor of ascorbic acid (vitamin C), 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid, was isolated from both the ripe fresh fruit and dried fruit of *Lycium barbarum* L., a plant of the Solanaceae family. The chemical structure was inferred by instrumental analyses and confirmed by chemical synthesis. The dried fruit of *Lycium barbarum* L. contained approx. 0.5% of it, which is comparable to the ascorbic acid content of fresh lemons. It increased the blood ascorbic acid by oral administration to rats, and it was also detected in blood from the portal vein.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:551525 CAPLUS

DN 139:116587

TI 2-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid, process for its preparation, and its use in foods and cosmetics

IN Maeda, Mitsuru; Nakao, Masahiro; Fukami, Harukazu

PA Suntory Limited, Japan

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

*Mine*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003057707	A1	20030717	WO 2002-JP13857	20021227
W: AU, CA, CN, JP, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
CA 2472114	AA	20030717	JP 2001-400258	A 20011228
			CA 2002-2472114	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
EP 1461347	A1	20040929	EP 2002-793462	20021227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
US 2005113312	A1	20050526	US 2003-500334	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
JP 2005518401	T2	20050623	JP 2003-558021	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227

OS MARPAT 139:116587

IT 562043-83-8P

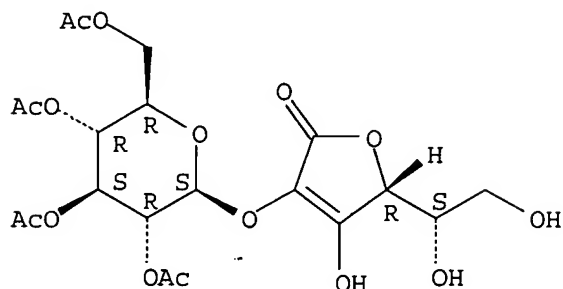
RL: SPN (Synthetic preparation); PREP (Preparation)

(2-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid, process for its preparation, and its use in foods and cosmetics)

RN 562043-83-8 CAPLUS

CN L-Ascorbic acid, 2-O-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl) -  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB The present invention provides a novel ascorbic acid derivative as a provitamin C with improved stability in the body and prolonged life in the body compared to conventionally known 2-O-(α-D-glucopyranosyl)ascorbic acid. The composition comprising the novel compound 2-O-(β-D-glucopyranosyl)ascorbic acid has been extracted from plants such as from Ningxia (*Lycium barbarum*) and/or *Lycium chinense*. The compns. comprising 2-O-(β-D-glucopyranosyl)ascorbic acid may be enzymically synthesized using β-D-glucosyltransferase. Pure 2-O-(β-D-glucopyranosyl)ascorbic acid may be produced from such compns. Alternatively, 2-O-(β-D-glucopyranosyl)ascorbic acid may be produced by chemical synthesis. The 2-O-(β-D-glucopyranosyl)ascorbic acid results in higher stability and a prolonged life of vitamin C when ingested in the body compared to the corresponding α-D-glucopyranosyl derivative, and is therefore highly suitable as a provitamin C to be used in cosmetics and foods.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 14:31:54 ON 26 SEP 2005)

FILE 'REGISTRY' ENTERED AT 14:32:08 ON 26 SEP 2005

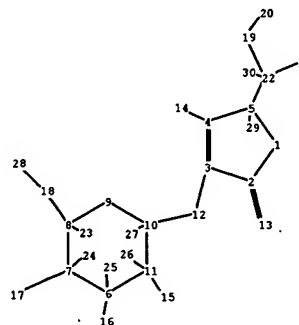
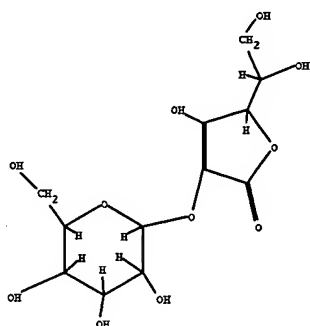
L1 STRUCTURE UPLOADED  
L2 STRUCTURE UPLOADED  
L3 6 S L1 EXACT FULL  
L4 1 S L2 FULL  
L5 37 S L1 FULL

FILE 'CAPLUS' ENTERED AT 14:34:21 ON 26 SEP 2005

L6 3 S L4

=> s 15

L7 326 L5



chem 1

chain nodes :

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

2-13 3-12 4-14 5-22 5-29 6-16 6-25 7-17 7-24 8-18 8-23 10-12 10-27 11-15  
11-26 18-28 19-20 19-22 21-22 22-30

ring bonds :

1-2 1-5 2-3 3-4 4-5 6-7 6-11 7-8 8-9 9-10 10-11

exact/norm bonds :

1-2 1-5 2-13 2-3 3-12 3-4 4-5 4-14 6-7 6-11 6-16 7-8 7-17 8-9 9-10 10-11  
10-12 11-15 21-22

exact bonds :

5-22 5-29 6-25 7-24 8-18 8-23 10-27 11-26 18-28 19-20 19-22 22-30

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom  
12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS  
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS  
30:CLASS

=> s 11 full exact  
FULL SEARCH INITIATED 17:03:15 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 40 TO ITERATE

100.0% PROCESSED 40 ITERATIONS  
SEARCH TIME: 00.00.01

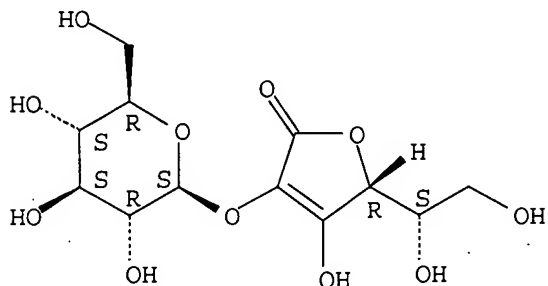
6 ANSWERS

L2 6 SEA EXA FUL L1

=> d 12

L2 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 562043-82-7 REGISTRY  
ED Entered STN: 07 Aug 2003  
CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H18 O11  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



*claim 1 cpd.*

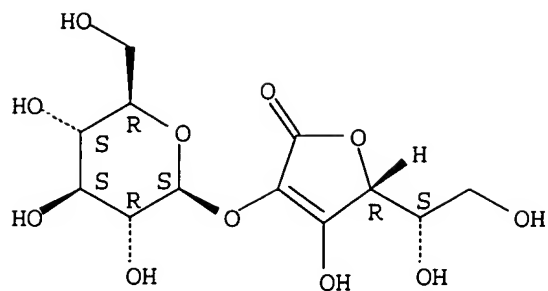
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

16 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
16 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 1-6 12

L2 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 562043-82-7 REGISTRY  
ED Entered STN: 07 Aug 2003  
CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H18 O11  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

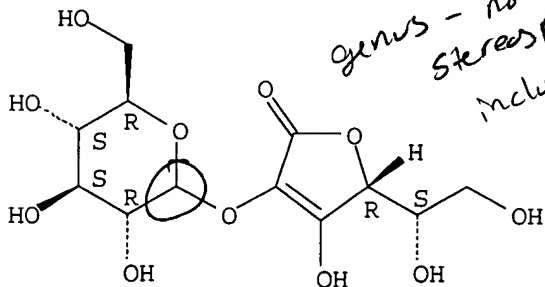


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

16 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 16 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 215363-57-8 REGISTRY  
 ED Entered STN: 10 Dec 1998  
 CN L-Ascorbic acid, 2-O-D-glucopyranosyl- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 DR 406485-28-7  
 MF C12 H18 O11  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

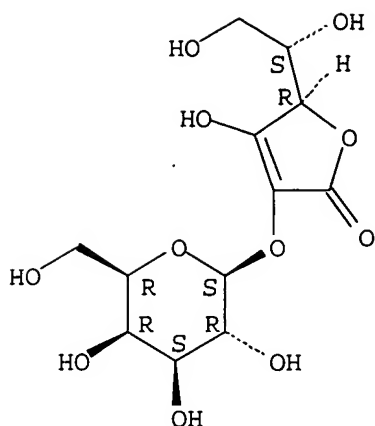


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

10 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 10 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 160009-30-3 REGISTRY  
 ED Entered STN: 06 Jan 1995  
 CN L-Ascorbic acid, 2-O- $\beta$ -D-galactopyranosyl- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN O- $\beta$ -D-Galactopyranosyl-L-ascorbic acid  
 FS STEREOSEARCH  
 MF C12 H18 O11  
 SR CA  
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.

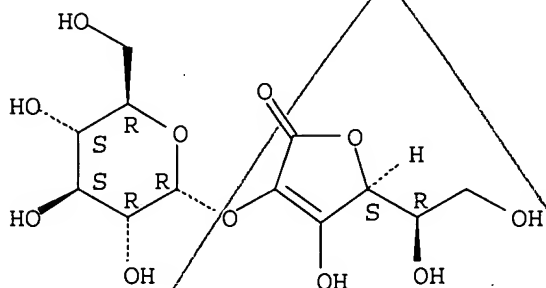


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 156970-00-2 REGISTRY  
ED Entered STN: 12 Aug 1994  
CN D-Ascorbic acid, 2-O- $\alpha$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H18 O11  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.

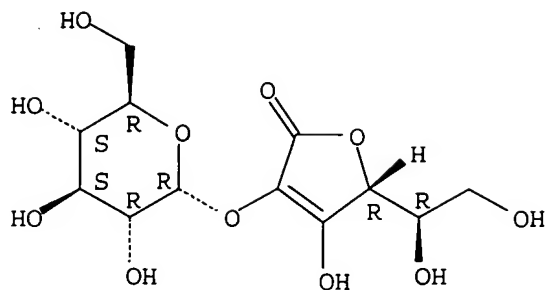


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 154160-11-9 REGISTRY  
ED Entered STN: 06 Apr 1994  
CN D-erythro-Hex-2-enonic acid, 2-O- $\alpha$ -D-glucopyranosyl-,  
 $\gamma$ -lactone (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H18 O11  
SR CA  
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

RN 129499-78-1 REGISTRY

ED Entered STN: 21 Sep 1990

CN L-Ascorbic acid, 2-O- $\alpha$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2-O- $\alpha$ -D-Glucopyranosyl-L-ascorbic acid

CN 2-O- $\alpha$ -D-Glucosyl-L-ascorbic acid

CN AA 2G

CN Ascorbyl glucoside

CN L-Ascorbic acid 2-glucoside

CN L-Ascorbic acid glucoside

FS STEREOSEARCH

DR 768394-81-6, 577772-83-9, 152452-81-8, 149614-94-8, 189746-43-8,  
286844-98-2, 334667-58-2, 340136-52-9, 446287-26-9

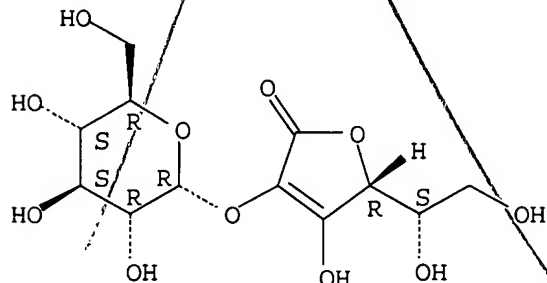
MF C12 H18 O11

CI COM

SR CA

LC STN Files: BEILSTEIN\*, BIOSIS, CA, CANCERLIT, CAPLUS, CASREACT,  
CHEMLIST, MEDLINE, PROUSDDR, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

295 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

295 REFERENCES IN FILE CAPLUS (1907 TO DATE)



Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal600txm

PASSWORD:

\*\*\*\*\* RECONNECTED TO STN INTERNATIONAL \*\*\*\*\*  
SESSION RESUMED IN FILE 'CAPLUS' AT 17:07:15 ON 26 SEP 2005  
FILE 'CAPLUS' ENTERED AT 17:07:15 ON 26 SEP 2005  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	79.94	158.15
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-11.68	-11.68

=> d his

(FILE 'HOME' ENTERED AT 16:27:04 ON 26 SEP 2005)

FILE 'REGISTRY' ENTERED AT 16:27:11 ON 26 SEP 2005

E 2-O-(B-D-GLUCOPYRAOSYL) ASCORBIC ACID/CN  
E 2-O-(B-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(BETA-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(ALPHA-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(ALPHA-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(B-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(B-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E 2-O-(A-D-GLUCOPYRANOSYL) ASCORBIC ACID/CN  
E ASCORBIC ACID/CN  
E ASCORBIC ACID 2-O-(A-D-GLUCOPYRANOSYL)/CN  
STRUCTURE UPLOADED

L1

FILE 'REGISTRY' ENTERED AT 17:03:07 ON 26 SEP 2005

L2 6 S L1 FULL EXACT

L3 1 S 562043-82-7/RN

*Searched registry #  
for cpl. of claim 1*

FILE 'CAPLUS' ENTERED AT 17:05:27 ON 26 SEP 2005

L4 16 S L3

=> d fbib abs hitstr 1-16 14

L4 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:632278 CAPLUS

DN 143:139181

TI Oral and injection compositions containing vitamin C derivatives,  
antitumor polysaccharides, and antioxidants, and manufacture thereof

IN Iida, Shigeo

PA Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

PI JP 2005194255 A2 20050721 JP 2004-28651 20040106  
JP 2004-28651 20040106

AB The invention relates to an oral and/or injection composition for treatment and/or prevention of various disease including tumor, wherein the composition is characterized by containing a bound compound of a vitamin C derivative, an antitumor polysaccharide, and an antioxidant. A method for manufacturing the composition including freeze-drying and/or spray-drying of the mixture of the components is also disclosed. For example, a mixture containing ascorbic acid 40, L-ascorbic acid-2-O-phosphate sodium salt 7, 6-O-palmitoyl-L-ascorbic acid 3, Agaricus blazei extract 16, Phellinus linteus 16, fucoidan 16, and marine taurine 2 parts was freeze-dried. The obtained freeze-dried composition was injected to mice to examine the antitumor effect.

IT 562043-82-7

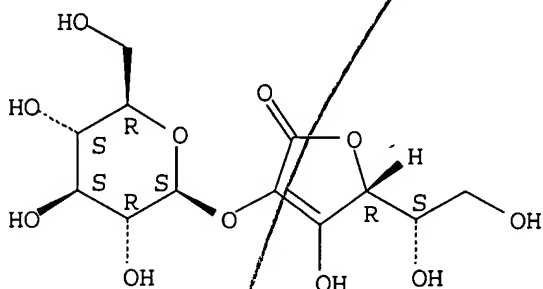
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(oral and injection comps. containing vitamin C derivs., polysaccharides, and antioxidants, and manufacture thereof)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:554416 CAPLUS

DN 143:247566

TI A novel vitamin C analog, 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid:  
Examination of enzymatic synthesis and biological activity

AU Toyada-Ono, Yoshiko; Maeda, Mitsuru; Nakao, Masahiro; Yoshimura, Makiko;  
Sugiura-Tomimori, Namino; Fukami, Harukazu; Nishioka, Hitomi; Miyashita,  
Yayoi; Kojo, Shosuke

CS Institute for Health Care Science, Technological Development Center,  
Suntory Ltd., Osaka, 618-0001, Japan

SO Journal of Bioscience and Bioengineering (2005), 99(4), 361-365  
CODEN: JBBIF6; ISSN: 1389-1723

PB Society for Biotechnology, Japan

DT Journal

LA English

AB 2-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid (AA2BG) isolated from a popular traditional Chinese food (Lycium fruit) was synthesized using cellulase derived from Trichoderma sp. with cellobiose as a glucose donor. 6-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid as well as AA2BG was also synthesized in this reaction. The vitamin C activity of AA2BG was also evaluated using inherently scorbutic (osteogenic disorder Shionogi [ODS]) rats. The rats were fed vitamin C-deficient food and water containing AA2BG for 21 days. AA2BG supported their growth and the level of vitamin C in tissues was moderately maintained. The vitamin C level in some tissues depended on the hydrolytic activity of AA2BG ( $\beta$ -glucosidase activity) although the correlation was not

statistically significant ( $P=0.08$ ). The results indicate that AA2BG has pro-vitamin C activity.

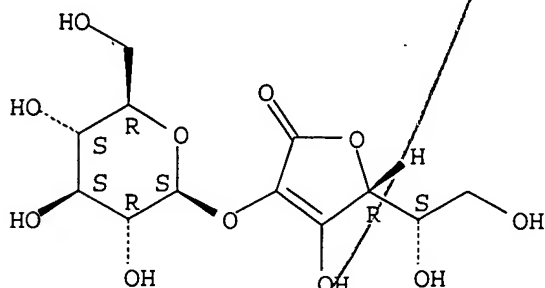
IT 562043-82-7P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)  
(enzymic synthesis and biol. activity of novel vitamin C analog, 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:408245 CAPLUS

DN 142:451470

TI Viscous, storage-stable, nonsticky cosmetics containing salt-type active ingredients

IN Sakura, Toru; Nakamura, Tadashi

PA Shiseido Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005120056	A2	20050512	JP 2003-359583	20031020
				JP 2003-359583	20031020

AB Title cosmetics, especially useful for skin-lightening cosmetics, contain xanthan gum (I) and guar gum (II), preferably in (20-50):(50-80). The gums show synergistic thickening effect. Thus, viscous solution containing 3:2 I-II mixture was mixed with aqueous ascorbic acid 2-glucoside solution at 50° and cooled to show 4300 mPa-s at 30°.

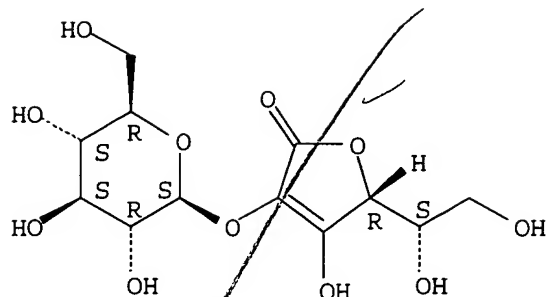
IT 562043-82-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(viscous skin-lightening cosmetics containing xanthan gum, guar gum, and ascorbic acids and/or alkoxysalicylates)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:155690 CAPLUS  
 DN 142:225270  
 TI Drip-resistant liquid compositions containing thickeners and chelating agents for hair and skin  
 IN Matsumoto, Satoshi; Kurimoto, Hirokatsu; Hamachi, Kano; Saito, Yoshinobu; Okuda, Takaya; Nishina, Tetsuo  
 PA P and Pf K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

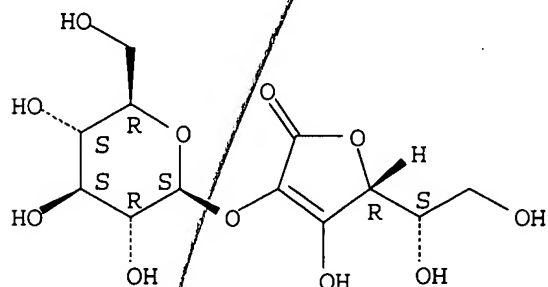
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005047876	A2	20050224	JP 2003-283472	20030731
			JP 2003-283472	20030731

AB The compns. contain thickening agents, chelating agents, and medicinal components in H<sub>2</sub>O-alcs. A hair growth stimulant was prepared from (GeCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H) 203 0.15, Bio Hyaluro 12 1.0, Clewat OH 300 (chelating agent) 0.36, EtOH 30.0, and H<sub>2</sub>O to 100 weight%. The stimulant showed high viscosity even after storage at 37° for 4 wk.

IT 562043-82-7  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (drip-resistant liquid cosmetics containing thickeners, chelating agents, and medicinal substances)

RN 562043-82-7 CAPLUS  
 CN L-Ascorbic acid 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:14228 CAPLUS  
 DN 142:100007  
 TI Skin preparations containing ascorbic acid derivative  
 IN Maeda, Mitsuru; Nakao, Masahiro; Fukami, Harukazu

PA Suntory Limited, Japan  
SO PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000319	A1	20050106	WO 2004-JP9012	20040625
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

JP 2003-183610 A 20030626

AB It is intended to provide a skin composition for external use that contains an ascorbic acid derivative having a high stability, being continuously usable in vivo, having a strong antioxidant effect and showing little skin irritation and has an excellent skin permeability. A composition for external use is characterized by containing 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid or its salt or ester being safe to the human body together with optionally treated koji mold cells.

IT 562043-82-7P

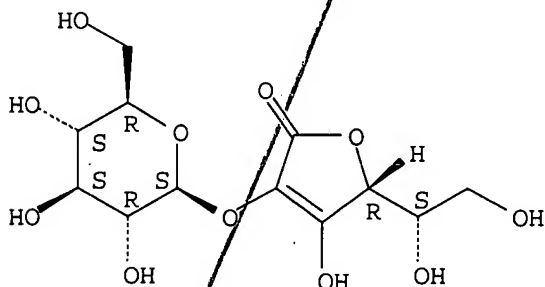
RL: COS (Cosmetic use); NPO (Natural product occurrence); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)

(skin preps. containing ascorbic acid derivative and koji mold)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:980020 CAPLUS

DN 142:266282

TI Cosmetic compositions comprising vitamin C or derivatives thereof and Areca catechu L extract for preventing skin aging

IN Choi, Jeong Do; Lee, Geon Guk; Lee, Gwang Sik

PA Coreana Cosmetics Co., Ltd., S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DT Patent  
LA Korean  
FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2003043471	A	20030602	KR 2001-74658 KR 2001-74658	20011128 20011128

AB Provided is a cosmetic compns. comprising as active ingredient, vitamin C or derivs. thereof and an Areca catechu L extract for preventing skin aging to increase wrinkle care effect and improve moisturization, and abirritate skin stimulation. A composition for preventing skin aging is characterized by comprising 0.005-20% of vitamin C or its derivs., such as Et ascorbyl ether, magnesium ascorbyl phosphate, ascorbic acid 2-glucoside or allantoin ascorbate, and 0.0001-10.0% of an Areca catechu L extract

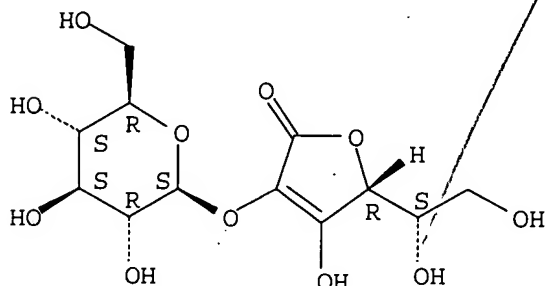
IT 562043-82-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic compns. comprising vitamin C or derivs. thereof and Areca catechu L extract for preventing skin aging)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:770688 CAPLUS

DN 142:406702

TI Suppressive effects of ascorbate derivatives on ultraviolet-B-induced injury in HaCaT human keratinocytes

AU Yasuda, Shin; Tada, Mikiro; Yamada, Koji; Takahata, Kyoya

CS Laboratory of Food Biological Chemistry, Faculty of Agriculture, Okayama University, Okayama, 700-0082, Japan

SO In Vitro Cellular & Developmental Biology: Animal (2004), 40(3 and 4), 71-73

CODEN: IVCAED; ISSN: 1071-2690

PB Society for In Vitro Biology

DT Journal

LA English

AB The aging of skin, including sunburning, is caused by UV irradiation. Here, we examined the inhibitory effect of ascorbic acid (AsA) and its derivs. AsA 2-phosphate (AA-2P) and AsA 2-glucoside (AA-2G) on UV-B-induced cytotoxicity in HaCaT keratinocytes. Results show that cell viability significantly decreased when exposed to UV-B at 0.1-0.4 J/cm<sup>2</sup> in a dose-dependent manner. In this study, AsA could not inhibit cytotoxicity, but AA-2P and AA-2G was able to cancel the harmful effect of UV-B when treated at high levels of 0.5-5 mM. These results indicate that the masking of the C-2 OH group may be an effective modification for AsA to inhibit UV-B-induced cytotoxicity in human keratinocytes.

IT 562043-82-7

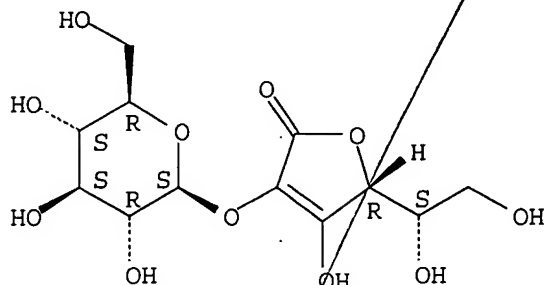
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(suppressive effects of ascorbate derivs. on UV-B-induced injury in  
HaCaT human keratinocytes)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE/FORMAT

L4 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:717801 CAPLUS

DN 141:230694

TI Topical preparations containing ascorbates with reduced stinging for  
prevention and treatment of acne

IN Ikeno, Hiroshi; Nomura, Koichi; Yoshinaka, Keiichiro; Mori, Fukuyoshi

PA Pola Chemical Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004244370	A2	20040902	JP 2003-35845	20030214
			JP 2003-35845	20030214

AB The topical preps. contain 4-6 weight% ascorbic acid (AA), its derivs.,  
and/or its salts and 0.4-1 weight% buffers. A composition containing citric  
acid

0.035, Na citrate 0.5, di-Na ascorbyl phosphate 5 weight parts,  
anti-inflammatory herbal medicine exts., etc., showed reduced stinging.

IT 562043-82-7

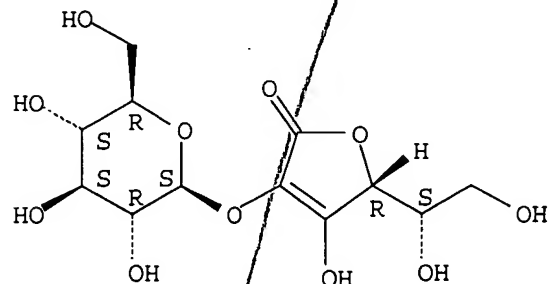
RL: COS (Cosmetic use); MOA (Modifier or additive use); BIOL (Biological  
study); USES (Uses)

(topical preps. containing ascorbates and buffers for reduced stinging for  
prevention and treatment of acne)

RN 562043-82-7 CAPLUS

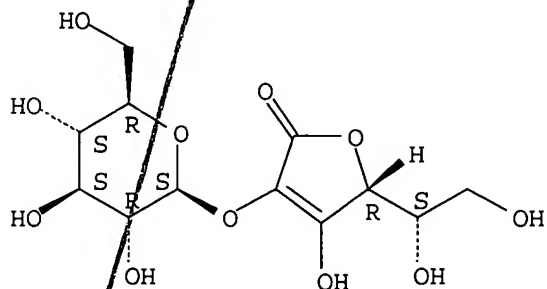
CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:518460 CAPLUS  
 DN 141:300979  
 TI Simultaneous determination of magnesium ascorbyl phosphate, ascorbyl glucoside, kojic acid, arbutin and hydroquinone in skin whitening cosmetics by HPLC  
 AU Huang, Shou-Chieh; Lin, Cheng-Chin; Huang, Ming-Chuan; Wen, Kuo-Ching  
 CS Department of Health, Executive Yuan, Bureau of Food and Drug Analysis, Taipei, 115, Taiwan  
 SO Yaowu Shipin Fenxi (2004), 12(1), 13-18  
 CODEN: YSFEEP; ISSN: 1021-9498  
 PB National Laboratories of Food and Drugs, Dep. of Health, Executive Yuan  
 DT Journal  
 LA English  
 AB A HPLC method was developed for simultaneous determination of 5 whitening ingredients: magnesium ascorbyl phosphate, ascorbyl glucoside, kojic acid, arbutin and hydroquinone decomposed from arbutin in cosmetics. Samples were extracted with 0.05M KH<sub>2</sub>PO<sub>4</sub> buffer solution (pH 2.5) and analyzed on a Cosmosil 5 C18-AR-II column. A mixture of 0.05 M KH<sub>2</sub>PO<sub>4</sub> buffer solution (pH 2.5) and methanol (99:1, volume/volume) was used as mobile phase. The UV detector was set at 280 nm. Pyridoxine was used as an internal standard. The related coeffs., R<sup>2</sup>, of regression equations of the 5 standard curves were 0.9998-1.0000. The relative standard deviations of the 5 ingredients for intraday and interday anal. were <2.4%. The average recoveries of these 5 ingredients spiked in sample ranged 93.5-103.3%. The relative standard deviations of average recoveries were <1.3%. The limits of quantitation in cosmetics were 80.0, 20.0, 3.0, 15.0 and 10.0 µg/mL for magnesium ascorbyl phosphate, ascorbyl glucoside, kojic acid, arbutin and hydroquinone, resp.  
 IT 562043-82-7  
 RL: ANT (Analyte); ANST (Analytical study)  
 (simultaneous determination of ascorbyl phosphate and glucoside and kojic acid and arbutin and hydroquinone in skin whitening cosmetics by HPLC)  
 RN 562043-82-7 CAPLUS  
 CN L-Ascorbic acid, 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



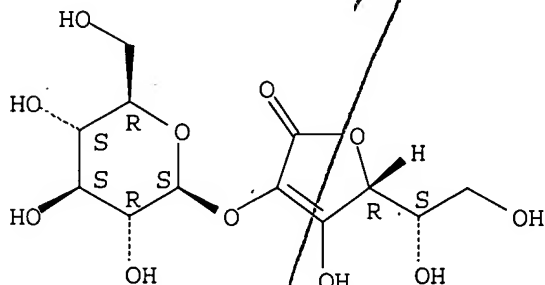
RE.CMT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:178992 CAPLUS  
 DN 140:374192  
 TI 2-O-(β-D-glucopyranosyl)ascorbic acid, a novel ascorbic acid analogue isolated from Lycium fruit  
 AU Toyoda-Ono, Yoshiko; Maeda, Mitsuru; Nakao, Masahiro; Yoshimura, Makiko; Sugiura-Tomimori, Namino; Fukami, Harukazu



CS Health Care Science Laboratory, Institute for Food & Beverage,  
 Technological Development Center, Suntory Ltd., Osaka, 618-0001, Japan  
 SO Journal of Agricultural and Food Chemistry (2004) 52(7), 2092-2096  
 CODEN: JAFCAU; ISSN: 0021-8561  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB A novel stable precursor of ascorbic acid (vitamin C),  
 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid, was isolated from both the  
 ripe fresh fruit and dried fruit of *Lycium barbarum* L., a plant of the  
 Solanaceae family. The chemical structure was inferred by instrumental  
 analyses and confirmed by chemical synthesis. The dried fruit of *Lycium*  
*barbarum* L. Contained .apprx.0.5% of it, which is comparable to the  
 ascorbic acid content of fresh lemons. It increased the blood ascorbic  
 acid by oral administration to rats, and it was also detected in blood  
 from the portal vein.  
 IT **562043-82-7P**  
 RL: PRP (Properties); PUR (Purification or recovery); SPN (Synthetic  
 preparation); PREP (Preparation)  
 (ascorbic acid analog, 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid,  
 isolated from *Lycium* fruit)  
 RN 562043-82-7 CAPLUS  
 CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) . (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:177905 CAPLUS  
 DN 140:222890  
 TI Cosmetic and dermatological preparation containing 8-hexadecene-1,16-  
 dicarboxylic acid for treating skin pigmentation disorders  
 IN Wolber, Rainer; Smuda, Christoph; Batzer, Jan; Biergiesser, Helga;  
 Raschke, Thomas; Max, Heiner; Fey, Sven  
 PA Beiersdorf A.-G., Germany  
 SO Ger. Offen., 36 pp.  
 CODEN: GWXXBX

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10238449	A1	20040304	DE 2002-10238449	20020822
	WO 2004017935	A1	20040304	WO 2003-EP50249	20030620
	W: JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				
	IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
				DE 2002-10238449	A 20020822
	EP 1572146	A1	20050914	EP 2003-792423	20030620

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK

DE 2002-10238449 A 20020822  
WO 2003-EP50249 W 20030620

AB The invention concerns topical compns. that include 8-hexadecene-1,16-dicarboxylic acid [20701-68-2] and at least one of the components from the group of ursolic acid, agouti peptides, licorice extract, hydroquinone, green tea extract, arbutin, biotin, uva-ursi extract, glycyrrhizine, placenta extract,

ascorbyl glucoside, endothelin antagonist and chamomile extract Thus a composition contained (weight/weight%): glyceryl stearate citrate 2; myristyl myristate 1; stearyl alc. 2; cetyl alc. 1; hydrogenated coco glycerides 2; butylene glycol dicaprylate/dicaprate 1; ethylhexyl coco fatty acid ester 3; vaseline 1; cyclomethicone 3; dicaprylyl eter 1; titanium dioxide 1; ethylhexylmethoxy cinnamate 5; butylmethoxy dibenzoyl methane 1; octadecene dioic acid 1; ursolic acid 0.1; iminodisuccinate sodium salt 0.2; phenoxyethanol 0.3; paraben 0.6; diazolidinyl urea 0.25; carbomer 0.05; ammonium polyacryloyl di-Me taurate 0.4; glycerin 10; dyes 0.05; fillers and additives 0.1; perfume q.s.; water to 100.

IT 562043-82-7

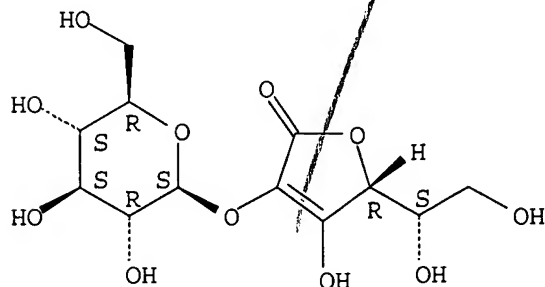
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic and dermatol. preparation containing

8-hexadecene-1,16-dicarboxylic  
acid for treating skin pigmentation disorders)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:159324 CAPLUS

DN 140:204815

TI Skin-lightening cosmetics containing phosphatidylcholines and ascorbic acids

IN Sakaguchi, Hiroyuki

PA Q. P. Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004059496	A2	20040226	JP 2002-219675	20020729
				JP 2002-219675	20020729

OS MARPAT 140:204815

AB Cosmetics contain R1OCH2CH(OR2)CH2OP(O)(O-)OCH2CH2N+Me3 (I; R1 = C14-22 linear fatty acid residue; R2 = C8-10 linear saturated fatty acid residue) and ascorbic acids. I improves skin permeability of ascorbic acids. A cream was prepared from stearic acid 10.0, squalane 10.0, silicone oil 2.0,

glycerin monostearate 2.0, butylparaben 0.1, phosphatidylcholine (prepared from Egg Yolk Lysolecithin LPC 1 and octanoic acid) 2.0, ascorbic acid 2-glucoside 3.0, sorbitol 5.0, methylparaben 0.1, KOH, and H2O to 100%.

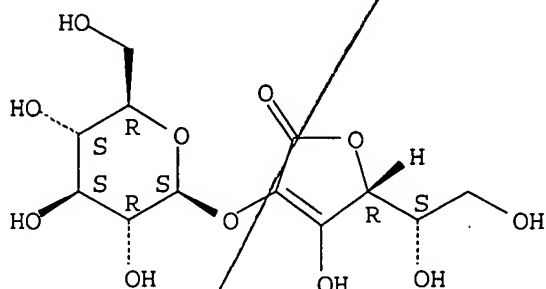
IT 562043-82-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(skin-lightening cosmetics containing phosphatidylcholines and ascorbic acids)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:60301 CAPLUS

DN 140:105308

TI Cyclic AMP-modulating compounds and compositions for the treatment of peripheral neuropathies, preparation thereof, and uses

IN Fontes, Michel; Passage, Edith; Sangeudolce, Veronique; Noreel, Jean-Chretien

PA Universite de la Mediterranee, Fr.; Institut National de la Sante et de la Recherche Medicale; Association Francaise Contre Les Myopathies

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004006911	A2	20040122	WO 2003-FR2236	20030715
	WO 2004006911	A3	20040408		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IE, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	FR 2842422	A1	20040123	FR 2002-8966	A 20020716
	CA 2492368	AA	20040122	CA 2003-2492368	20030715
				FR 2002-8966	A 20020716
				WO 2003-FR2236	W 20030715
EP 1526850		A2	20050504	EP 2003-753643	20030715
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
				FR 2002-8966	A 20020716
				WO 2003-FR2236	W 20030715

US 2005187290

A1

20050825

US 2003-521239

20030715

FR 2002-8966

A 20020716

WO 2003-FR2236

W 20030715

AB The invention discloses the use of a cAMP modulator in the preparation of compns. that are intended for the prevention or treatment of peripheral neuropathies. The invention further discloses tools and kits used to prepare the compns. The cAMP modulators of the invention include a variety of vitamin C compds.

IT 562043-82-7

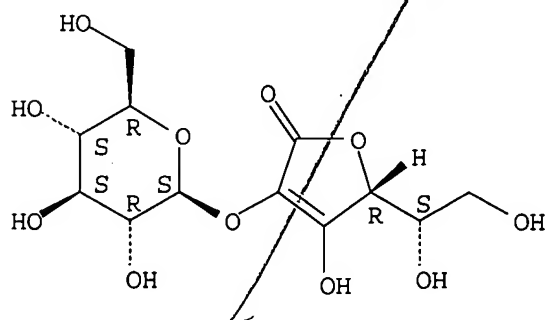
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cAMP-modulating compds. and compns. for treatment of peripheral neuropathies)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:821550 CAPLUS

DN 140:258573

TI Novel provitamin C products for beautiful skin: difference of pharmacological properties between ascorbic acid 2-O-β-D-glucoside and α-type provitamin C

AU Kawamura, Takuya; Maeda, Kentaro; Maeda, Mitsuru; Fukami, Harukazu; Kiso, Yoshinobu; Akagi, Kunika; Miwa, Nobuhiko

CS Dep. of Bioresources, Hiroshima Prefectural University, Japan

SO Bihada-Hifu Bogo to Baigijutsu (2003), 136-151. Editor(s): Miwa, Nobuhiko. Publisher: Shi Emu Shi Shuppan, Tokyo, Japan.

CODEN: 69ERD9; ISBN: 4-88231-408-8

DT Conference; General Review

LA Japanese

AB A review. Difference of pharmacol. properties between α-type provitamin C 2-O-α-D-glucopyranosyl-L-ascorbic acid (its metabolite is vitamin C) and natural products extract 2-O-β-D-glucopyranosyl-L-ascorbic acid (novel provitamin C product) beautiful skin in the skin preparation is reviewed together with their mechanism and examples.

IT 562043-82-7

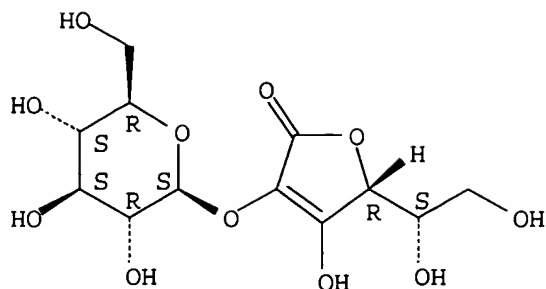
RL: COS (Cosmetic use); PAC (Pharmacological activity); BIOL (Biological study); USES (Uses)

(novel provitamin C products for beautiful skin: difference of pharmacol. properties between ascorbic acid 2-O-β-D-glucoside and α-type provitamin C)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2003:685984 CAPLUS  
 DN 139:218961  
 TI Skin-lightening cosmetics containing Dioscorea composita extracts and ascorbic acids  
 IN Hikima, Toshio; Tahata, Takashi, Yoshimi, Fuminobu; Yoshitani, Satoshi  
 PA Kanebo, Ltd., Japan; Mitsui Chemicals Inc.  
 SO Jpn. Kokai Tokkyo Koho, 12 pp  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003246719	A2	20030902	JP 2002-48734	20020225
			JP 2002-48734	20020225

OS MARPAT 139:218961

AB The cosmetics, which show good storage stability, contain D. composita extract and water-soluble ascorbic acid derivs. A skin lotion was prepared from

EtOH 10, polyoxyethylene hydrogenated castor oil derivative 0.5, dipropylene glycol 3, glycerin 2, L-ascorbic acid phosphate Mg salt 3.0, citric acid 0.1, Na citrate 0.03, D. composita extract 0.5, and H<sub>2</sub>O to 100 weight%.

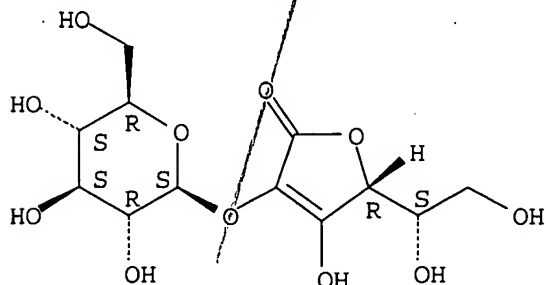
IT 562043-82-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (skin-lightening cosmetics containing Dioscorea composita exts. and ascorbic acids)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2003:551525 CAPLUS  
 DN 139:116587  
 TI 2-O-(β-D-Glucopyranosyl)ascorbic acid, process for its preparation, and its use in foods and cosmetics

*mm*

IN Maeda, Mitsuru; Nakao, Masahiro; Fukami, Harukazu  
PA Suntory Limited, Japan  
SO PCT Int. Appl., 67 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

*M. Itz*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057707	A1	20030717	WO 2002-JP13857	20021227
W: AU, CA, CN, JP, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
CA 2472114	AA	20030717	JP 2001-400258	A 20011228
			CA 2002-2472114	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
EP 1461347	A1	20040929	EP 2002-793462	20021227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
US 2005113312	A1	20050526	US 2003-500334	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227
JP 2005518401	T2	20050623	JP 2003-558021	20021227
			JP 2001-400258	A 20011228
			WO 2002-JP13857	W 20021227

OS MARPAT 139:116587

AB The present invention provides a novel ascorbic acid derivative as a provitamin C with improved stability in the body and prolonged life in the body compared to conventionally known 2-O-( $\alpha$ -D-glucopyranosyl)ascorbic acid. The composition comprising the novel compound 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid has been extracted from plants such as from Ningxia (*Lycium barbarum*) and/or *Lycium chinense*. The compns. comprising 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid may be enzymically synthesized using  $\beta$ -D-glucosyltransferase. Pure 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid may be produced from such compns. Alternatively, 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid may be produced by chemical synthesis. The 2-O-( $\beta$ -D-glucopyranosyl)ascorbic acid results in higher stability and a prolonged life of vitamin C when ingested in the body compared to the corresponding  $\alpha$ -D-glucopyranosyl derivative, and is therefore highly suitable as a provitamin C to be used in cosmetics and foods.

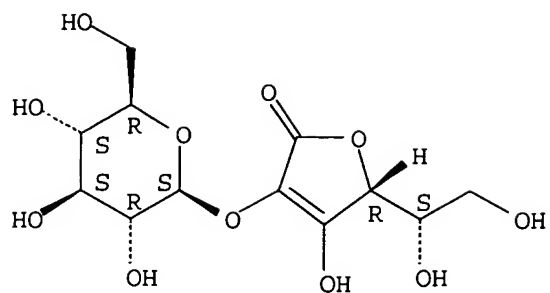
IT **562043-82-7DP**, tetraacylated **562043-82-7P**

RL: COS (Cosmetic use); FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(2-O-( $\beta$ -D-Glucopyranosyl)ascorbic acid, process for its preparation, and its use in foods and cosmetics)

RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

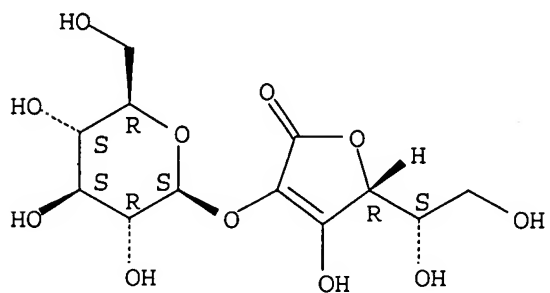
Absolute stereochemistry.



RN 562043-82-7 CAPLUS

CN L-Ascorbic acid, 2-O- $\beta$ -D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT